

**METHODS, APPARATUS AND COMPUTER PROGRAM
PRODUCTS FOR FORMULATING CULTURE MEDIA**

Abstract of the Disclosure

5 Methods, apparatus and computer program products are provided for identifying a component of culture medium based on the parameters (e.g., physical, chemical, biological and/or topological characteristics) of compounds from within a compound library. In preferred embodiments, the compound library is a peptide library. Also provided are methods of selecting a compound library from a larger compound space based on whole molecule (*i.e.*, global) parameters of the compounds. Preferably, this method is practiced in conjunction with a method of identifying a component of a culture medium. Further provided are methods of predicting a biological activity of a peptide based on at least one whole molecule parameter of the peptide. This method finds use in methods of drug discovery, identifying components of culture medium, and identifying and/or designing peptides with particular pharmacological or therapeutic activities.

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